



# User's Manual

PT-10/PT-12 Portable Data Collectors

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The general use and functioning of the collector together with the cradle will be described in this manual.

The exact behavior of the collector depends on the user application that is running. For instructions about applications please consult the documentation of that software.

**Please read this manual carefully before using the collector, to maximize the efficiency of this collector.**

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## **1. Introduction**

The PT series portable data collector (PDC) is well suited for a variety of portable applications. It has a built-in CCD scanning engine that can scan all popular bar code labels at varying distance (up to 13 inches).

User's applications can be downloaded to the collector to adapt the collector to the user's situation.

The operation power is supplied by the main battery (AA-size Alkaline batteries for PT-10, and a rechargeable Ni-MH battery pack for PT-12).

The CRD-10 cradle (only available for PT-12 model) is a communication and charging station for data transmission between the (host) computer system and the collector. It communicates with the collector through RS-232 serial or USB interface. The CRD-10 cradle will charge the rechargeable battery pack in the collector through the electrical contacts. And it also provides an extra charging slot for a spare battery pack if necessary.



## 2. Specifications

<b>Feature</b>	<b>PT-10</b>	<b>PT-12</b>
<b>CPU/Memory</b>		
OS	Proprietary	
CPU	32-bit RISC Processor with ARM core	
RAM	1M SRAM	2M SRAM
ROM	1M flash ROM	

<b>Display</b>	
Resolution	128 x 64 dots LCD
Backlight	LED backlight

<b>Scanner</b>	
Scanner system	Long Range CCD scanner 2048 pixels
Resolution	0.127mm (5 mil) at PCS 90%
Depth of field	330mm (code 39, 20 mils, 90% pcs)
PCS	≥30%
Scanning rate	100 scans/sec
Readable barcode	Code 39, UPC A/E, Cod 128, Int. 2 of 5, Codabar, Code 93, China Post Code, EAN-8/13, full ASCII code 39, ISBN/ISSN

<b>Keypad</b>	
Number of keys	22 rubber keys
Keypad color	Black

<b>Cable Interface / Communication</b>		
Data Rate	4800 bps ~ 115200 bps	
PC interface	RS-232	RS-232 / USB

<b>Environment</b>	
Operating temperature	0~40℃
Storage temperature	-20~70℃
Shock resistance	1.2M
EMC	FCC Class-B, CE,UL

<b>Power supply</b>		
Main power	2 x AA Alkaline battery	rechargeable Ni-MH battery pack
Back up power	3V rechargeable Lithium battery	

<b>Packing</b>		
RS-232 Cable	9-Pins to 10-Pins	9-pins to 9-pins
Battery	2 x AA Alkaline battery	Ni-HM battery pack
Clip holder	Yes	Yes
Hand strap	Yes	Yes
Cradle	No	Yes
Adapter	No	Yes
Package	Single PT-10 package	Complete package w/cradle

<b>Developing tools</b>	
Software	Windows based application generator:ArgoBuilder Software Development Kit (SDK)
Program Language	BSD C ANSI/ ISO Standard C

### 3. Getting Started

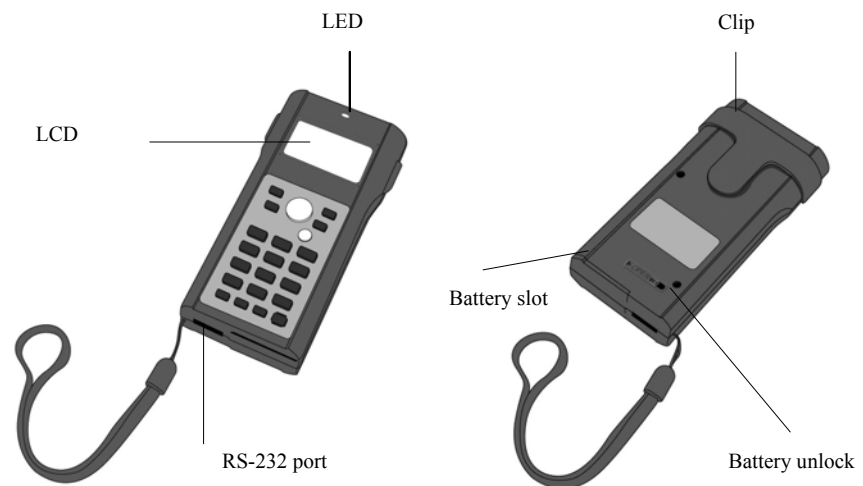
#### 3.1 Detailed View

##### 3.1.1 Collector

###### Dimensions of Collector

140mm (L) x 67mm (W) x 25.7mm (H)

###### Details of Collector



##### 1. Reading Window

Optical beam of LED for barcode reading will be emitted from here

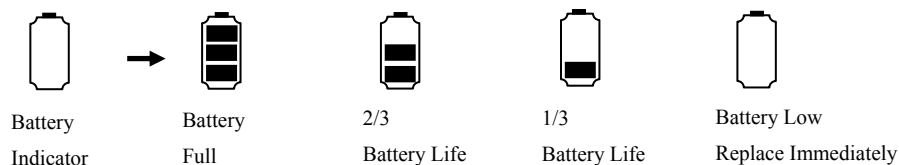
##### 2. LED Indicator

Can be used to indicate results, for example bar code reading / status of communication



### 3. LCD Display

For displaying information and battery status



### 4. Scan Key

Read Key, switches LED beam on for barcode reading

### 5. Cursor Key

Used for cursor LEFT, RIGHT, UP, and DOWN

### 6. ENT Key

For confirming input

### 7. Character Keys

For input of alpha-numeric and punctuation characters

### 8. Control Keys

For controlling basic functions. Typical use as below:

- C : Cancel – As function of back space
- ESC : Escape – Escape from the current operation
- FN : Function – Function Key
- Alpha : Alpha – Toggle between alpha and numeric mode

### 9. Power Key

For switching power On/Off

### 10. Multiple Function Socket

For data transmission (PT-10 / PT-12) and battery charging (PT-12)

### 11. Clip

Convenience for carrying with belt without handholding

### 12. Battery Unlock

To release the lock for withdrawing the battery pack

### 13. Battery Slot

The track of battery pack insertion and retrieval

### 14. Hand Strap

For security of collector when a sudden drop happened

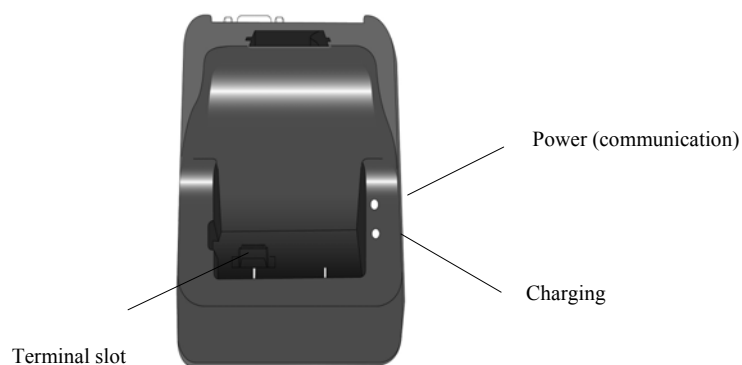
### 3.1.2 Cradle

#### Dimensions of CRD-10 Cradle

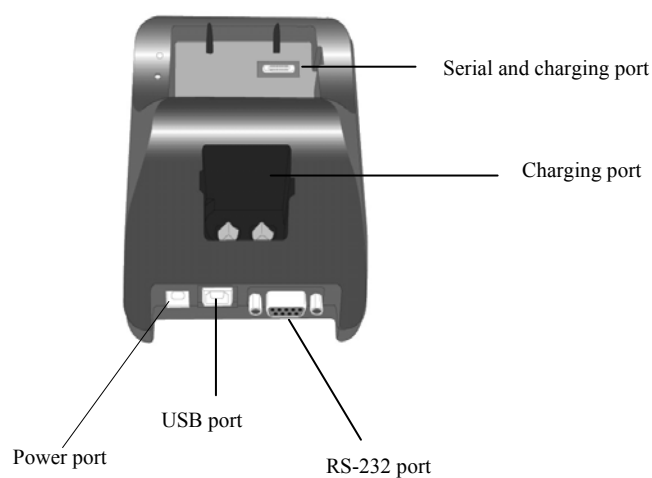
130mm (L) x 100mm (W) x 67.6mm (H)

#### Details of CRD-10 Cradle

##### Front



##### Back



#### 1. Collector Slot

Put the collector on the cradle through this slot for data transmission or charging

#### 2. Power / Communication LED Indicator

Green : Power on (collector not on cradle)

Orange : Data transmission (communication)

Collector insert into the cradle / Collector withdraw from the cradle

#### 3. Charging LED Indicator

Red flashing : Charging

Green : Charging completed

Red : Contact well

**4. Serial and Charging Connector**

To connect with the multiple function socket on the collector for data transmission and charging

**5. Charging Slot**

For charging a spare rechargeable battery pack

**6. RS-232 C Socket**

For connecting to PC serial port through Argox RS232 cable

**7. USB Socket**

For connecting to PC USB port through a standard USB cable

**8. DC Input Socket**

Input for AC adapter

## 3.2 Handling Precautions

To avoid malfunctioning and to ensure years of trouble free operation, pay attention to the following:

### General Use



Do not use or leave the product in extremely hot area – like direct sunlight, near a heater, or in a car – or in areas that are very cold, humid, moist, or dusty.



Do not expose the product to rain or water splash.



Do not subject the product to very strong impact, do not throw or drop the collector from large heights.

Do not allow a mechanical shock to the product.

### Cleaning Instruction



Clean the exterior by wiping it with a soft, dry cloth. Do not use much water.



Do not use thinner, white spirit or other solvents. These can discolour the case and the keys and has a negative effect on the lifetime of the keys.

### **Cleaning of the collector**

Clean the scan window periodically for better reading performance, but do not hurt on the window with scratches.

### **Cleaning of the cradle**

Avoid touching the contacts in the cradle. The contacts must stay as clean as possible to maintain optimal charging capacity. Do not use water when cleaning the cradle. This can cause malfunction in the chargers.

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### **Use of the collector**



Avoid temperature changes. Sudden temperature changes can cause condensation to form on the collector. Using the collector while condensation is present can cause malfunction. Always wait until the condensation clears naturally before attempting operation.



Do not leave the collector in an area where static charge is accumulated or near devices where electromagnetic emission is generated.

Do not place any object on top of the collector. Do not lay the collector face down. Doing so can cause accidental operation of the power key or [ENT] key, which can discharge your batteries or change settings you do not want to be changed.

### **Use of the cradle**

Do not place any product other than the PT-12 collector in the cradle.

### **Maintenance**



There are no user-serviceable parts inside the collector or the cradle. So do not try to take it apart. The manufacturer will not be liable for any damage caused by the customers. In case of malfunction that can not be solved by the trouble-shooting instruction in this manual, please consult service department.

### 3.3 Assembly

Follow the next steps to make your collector ready for installation in a system that is described further in the manual.

#### 3.3.1 Collector

**To avoid drop use the hand strap.**

1. Fix the small cord of the strap around the pillar of the collector.
2. Insert the handle of the strap in the thin loop.
3. The strap is fixed to the collector.
4. Hold the hand strap around the wrist when carrying the collector.



**Do not swing the collector around**



Start with a full battery

1. To be sure of proper operation, it is advised to start with a full battery, charge the battery pack according to the instructions in the next chapter.
2. Click the battery pack into the collector as instructed in the next chapter.

### 3.3.2 Cradle

#### **Power Connection**

1. Attach the DC jack of the AC adapter into the socket of the cradle. Then connect the AC adapter to the mains outlet. The LED on the cradle turns green.
2. When the PT-12 collector with the rechargeable battery pack is placed in the cradle, the LED on the cradle turns orange first and turns green at once then it starts to charge the collector.
3. When the PT-12 collector was removed from the cradle, the LED on the cradle turns orange first and turns green at once.

#### **Collector on cradle**

Take notice that the PT-12 cradle is designed for the PT-12 collector. No other type of collector can be placed into this cradle. This can cause damages to the connector on the cradle.



### 3.4 Installing, Replacing and Charging Batteries

Wrong use of batteries might cause serious damage to the collector or to the cradle. In order to avoid damage, it is very important to take notice of the instructions.



**Insert full batteries (or a full-charged battery pack) before use of the collector.**



**Never remove the main batteries (or battery pack) while the collector is turned on.**

Doing so can cause data in the collector to be deleted.



**When you do not use the collector for a long time, make sure the main batteries (or battery pack) have enough capacity.**

When there is not enough capacity in the main batteries (or battery pack), the backup battery can not be charged and will become too low.



**Only use recommended batteries.**

When other batteries are used, defects or other problems can occur. Before installing (new) batteries please make sure you are using the recommended batteries.



**Do not make a mistake regarding the polarity (+, -) of the battery.**

The collector will **NOT** work when the polarity is incorrect.



**Use the right charger for batteries.**

The rechargeable Ni-MH battery pack of Argox can be charged in the cradle when either it is in the collector or alone to the charging slot in the back of the cradle. Other rechargeable batteries need to be recharged in a separated battery-charging device.



**Follow the instructions for installing, charging, and removing the batteries very strictly.**

The products are not warranted for damage, defects, malfunction, or loss of data, resulting from incorrect use of batteries.

#### **Required batteries:**

The collector needs both main battery and backup battery for operation.



## Main Battery

The main battery can consist of:

1. Argox rechargeable battery pack (Ni-MH) (Ref. 1)

To be recharged when placing the collector in the cradle or just put the battery pack in the charging slot of the cradle (alone). This battery is supplied with the PT-12 collector and is recommended by Argox.



Ref. 1

2. Rechargeable batteries (Ref. 2)

Batteries that are not supplied by Argox must be AA-size and absolutely leak-proof. Their positive and negative poles should entirely contact the springs. They need to be put in the empty pack (Ref. 3 & 4) that is supplied by Argox. They need to be recharged by a separate battery-charging device. The battery brand in the picture 2 & 4 is just for reference only.



Ref. 2



Ref.3



Ref.4

3. Alkaline batteries (Ref. 5)

Disposable AA-size alkaline batteries also can be used in PT-10 or PT-12. They need to be put in the empty pack that is supplied by Argox. Alkaline batteries can not be recharged.



Ref.5

## Backup Battery

Use only one type of battery for backup:


Back cell: ML-614S (Lithium, button type). It was soldered on the PCB and can **NOT** be changed or replaced by users.

### How to charge Argox rechargeable battery pack in the cradle

1. Make sure that the Argox rechargeable battery pack is inserted in the collector. If the collector with the battery pack is placed in the cradle, the LED on the cradle will turn Orange first and turn to Green at once. When the collector is placed in the cradle, the rechargeable battery pack will be charged automatically.
2. If you have a spare Argox battery pack, you can replace the empty battery pack with a full battery pack for continuous collector operation. And put the empty battery pack in the charging slot of the cradle. The LED (CHG) on the cradle will turn to Red in flashing and turn to Green again when the battery is full.

### When to replace or recharge the main battery

There are two conditions that you need to replace the main battery.

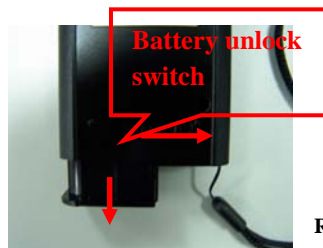
1. As soon as possible after the battery indicator or “Battery Low”  tip appears on the display.
2. Before using the collector again, in case it has not been used for an extended period.

### How to (re)place the main battery in the collector



Only use the batteries or battery pack as specified in the “Required batteries” section.

1. Retrieve the battery pack from the PT-10 or PT-12 by releasing the battery unlock switch (Ref. 1).
- 2.



Ref. 1

3. Change a full Argox battery pack for PT-12 directly, and push it back to the collector with correct direction (Ref. 2).



Ref. 2

4. Change the alkaline or rechargeable batteries in the pack case, and push the pack case back to the collector with correct direction (Ref. 3).



Ref. 3

- Make sure you use the right battery size.
- Place two batteries in the pack case aligning plus (+) and minus (-) ends as shown inside the pack case. Wrong direction may cause damage of batteries (Ref. 4 & 5).



### 3.5 Installing in a System



Exercise caution at all times when working with AC-powered equipment.



Turn off your devices before installation.



Because of the special pin-out of the connectors, use the cables supplied by the manufacturer.



Do not modify the cable provided by the manufacturer. If you need a special cable for some cases, contact your supplier to purchase the right cables or technical supports.

#### System Connection (Data Communication)

The PT series portable data collectors let you link to a host computer through an RS-232 cable or the CRD-10 cradle for data communication.

##### 3.5.1 Via RS-232 Cable


The PT series connects directly to the serial port of a host computer via the bundled RS-232 cable (9-pin connector for PC and 10-pin connector for collector).



### 3.5.2 Via CRD-10 Cradle

The CRD-10 cradle provides two methods for data transmission: through an RS-232 cable (9-pin connector for PC and 9-pin connector for collector) and through a USB cable.



** When both RS-232 and USB cables are connected between the CRD-10 cradle and host computer, the USB interface takes priority for data transmission and the RS-232 communication is automatically disabled.**

## 4. Operation of the Collector

### 4.1 Software Description

The functionality of the collector is determined by software, e.g. user application that is running on the collector.

Usually, the collector is not equipped with software. There are only some simple functions can be tested (like scanning test, com port test). So at the first use, the user application (an example provided in ArgoBuilder) must be loaded into collector.

Tools provided by Argox for developing a user application are:

- ArgoBuilder; application generator
- Software Development Kit (SDK); ARM code, C compiler and C library for handheld collector

The user application must be downloaded from the PC into the collector. You can use the cradle or an RS-232 cable for communication between the collector and the PC. A program (ArgoLink) on the PC will send the user application to the collector, where it is stored in Flash ROM (program made by ArgoBuilder or SDK) or SRAM (program made by ArgoBuilder).



**“ArgoBuilder” and “ArgoLink” will detailed explain in separate manual.**

When the functionality of the collector is defined by the application, it is ready for operation.

In a typical application, you will press the trigger key and scan a bar code label as described in the next paragraph. Scanned data and data entered from the keypad are stored in the collector's RAM. The user application can use this data in subsequent steps.

The collected data can be transmitted to the PC further processing through the cradle or the RS-232 cable.

## 4.2 Hardware Description

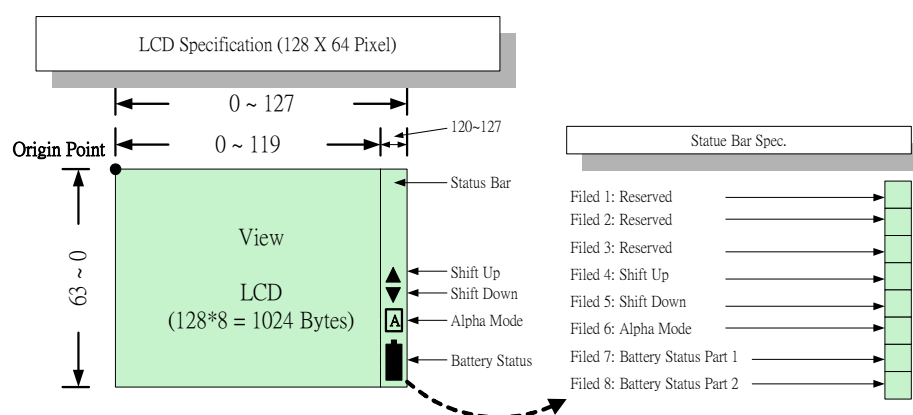
### 4.2.1 Display Description

The pixel number of the LCD display is 128 dots (W) \* 64 dots (H). The primitive point starts from the left up corner of the display. It was divided into two areas: View and Status Bar. Status Bar can be set as enabled or disabled. And View can be used with 8 x 8, 12 x 12, or 16 x 16 character fonts (please refer to the font detailed specification as below table). When the LCD back light was set as on, LCD back light will be started and keep 3 seconds and then off again if you press any key on the collector. LCD contrast can be also set up.

Status Bar setting: Go to Setting\BIOS Setting\ Status Bar.

LCD Contrast setting: Go to Setting\BIOS Setting\ LCD Contrast.

LCD Back Light setting: Go to Setting\BIOS Setting\Power Manager\Back Light.



























Font and Language Support:




Font Height	Font Width	Language	Max. characters / line
8 Dots (8 Line)	8 Dots	1 Byte (Eu-Am)	15 or 16 (status bar off)
12 Dots (5 Line)	8 Dots	1 Byte (Eu-Am)	15 or 16 (status bar off)
	12 Dots	2 Bytes (Asia)	10
16 Dots (4 Line)	12 Dots	1 Byte (Eu-Am)	10
	16 Dots	2 Bytes (Asia)	7 or 8 (status bar off)

## 4.2.2 Keypad Description

The PT Series keypad consists of 22 rubber keys including one trigger key.

Key Define		Function	
	Shift Left	Cursor moves left	Menu bar moves up by page
	Shift Right	Cursor moves right	Menu bar moves down by page
	Shift Up	Cursor moves up	Menu bar moves up
	Shift Down	Cursor moves down	Menu bar moves down
	Enter	Item selection confirmed or data input completed	
	Scanning	Enable scanner, only if the scan function is required.	
	Alpha Switch	Transform alphabet and numeral mode. The current mode will be shown on the LCD display when transformed.  means alphabet mode and it is numeral mode when  disappeared.	
	Function Key	There are various combinations of function under any-time condition and Edit Data condition.	
	Escape	Exit and back to the last layer.	
	Power Switch	Power switch, continuously press 0.5 second for power on/off	
	A, B, C and 7	Input A, B, C and 7	
	D, E, F and 8	Input D, E, F and 8	
	G, H, I and 9	Input G, H, I and 9	
	J, K, L and 4	Input J, K, L and 4	
	M, N, O and 5	Input M, N, O and 5	
	P, Q, R and 6	Input P, Q, R and 6	
	S, T, U and 1	Input S, T, U and 1	
	V, W, X and 2	Input V, W, X and 2	
	Y, Z, * and 3	Input Y, Z, * and 3	
	Cancel	Delete the data placed before the cursor	
	-*/ and 0	Input -, *, / and 0	
	%, \$, # and .	Input %, \$, # and .	


## 4.2.3 Function Key Description

- The function key  is specially designed for the instant setting (Hot-key) for some functions. It needs to be combined with other keys. When press  key, **Fun. + Key = ?!** will be shown on the bottom of the display. User needs to input another key for this Hot-key setting. This function will be canceled if press the  key again.
- Function key can be used under two conditions: Any-time condition and Edit data condition.



- Available function key combinations


Any-time condition:

 + [0]: Back Light Setting





 + [1]: LCD Contrast Setting

 + [2]: Beep Volume Setting

 + [3]: Read Confirm Setting

 + [9]: About PT-10 (PT-12)

#### 4.2.4 System Menu Language Change

- There are two system menu languages (English and Simplified Chinese). The default is English. If you want to change to another language, please press Function Key , Alpha Switch , Function Key , and Alpha Switch  again under system menu.
- System provides one language as user defined language for changing (excepting English). But you will need to change the language under Tool\Language Support in ArgoLink. To get the source file, please contact your local vendor.


#### 4.2.5 Power Management

- Power On Status  
Normal power consumption is around 60mA. But it will be around 110mA at full-function condition.
- Power Off Status:  
Power consumption is around 1mA.
- Auto-Off:  
When the auto-off timer at Setting\BIOS Setting\Power Manager\Power On\Auto-Off was set, the collector will turn off automatically when it is idle for a time period equal to the set timer.
- Battery Low Status : While under power on condition, if the battery capacity is low, the system will show a warning message and then turn off after a set timer.
- Recharging Status: While under power on condition, if you put the collector on the cradle, the battery indicator on the LCD display will show on charging status.

#### 4.2.6 Splashed Logo Description

- If there is no user-defined logo, the default logo in the system will be displayed. User can download Logo image file, which currently should be made by manufacturer – Argox, as a user-defined logo to collector by using ArgoBuilder. Then the collector will show this logo automatically every time when power on.
- If the setting of Setting\BIOS Setting\Power Manager\Power On State is “Reset”, no matter what mode it is now, the logo will be shown when power on.

### 4.3 Power –on Operation

You can use the PW  key to turn on or turn off the collector by continuously pressing on it for 0.5 second. After power off, the next power on screen will depend on the setting that user select at Setting\BIOS Setting\Power Manager\Power On\Resume or Reset to restart the collector or resume the status before power-off. When the collector is connected with a data transmission cable or put on the cradle, it will be switched on if there is any data transmitted into the collector. If the collector is always idle, it will be automatically switched off to save power.

#### 4.3.1 Power on mode


There are two operation modes for the users:

1. **Standard Mode:** Provide all features and menus. User can execute program, transmit file, set up scanning parameters, edit file, set up functions...and so on.
2. **Program mode:** Only provide the function for user to execute a specified program files.

Mode Change -

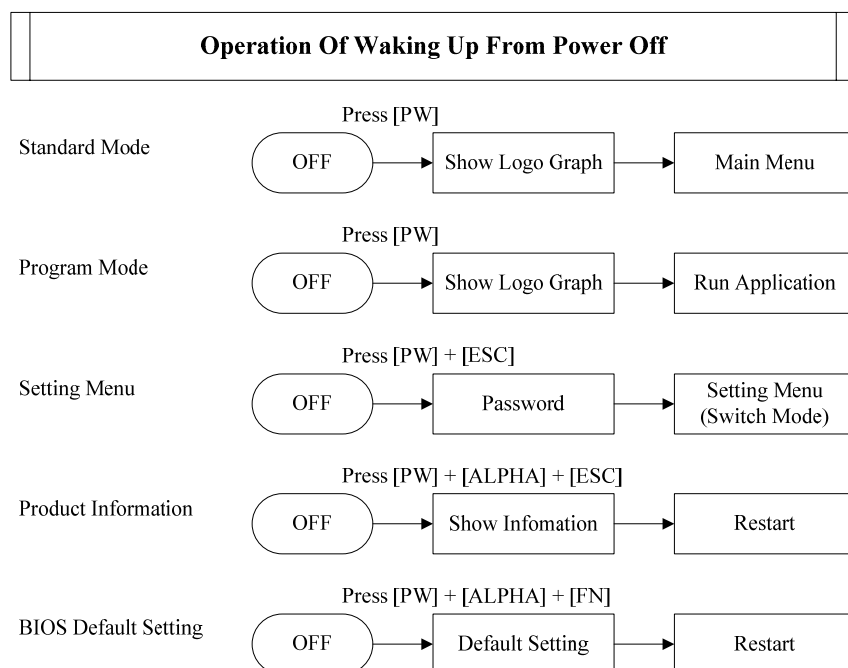
1. **Standard Mode:** Set up from setting menu.
2. **Program Mode:** You can use hot key to enter the Setting Menu.

#### 4.3.2 Power on by using hot key

When the collector is off, user can press PW  key and other special keys together to start Hot-key powering on the collector and get into special modes. Please refer to the below table for details:

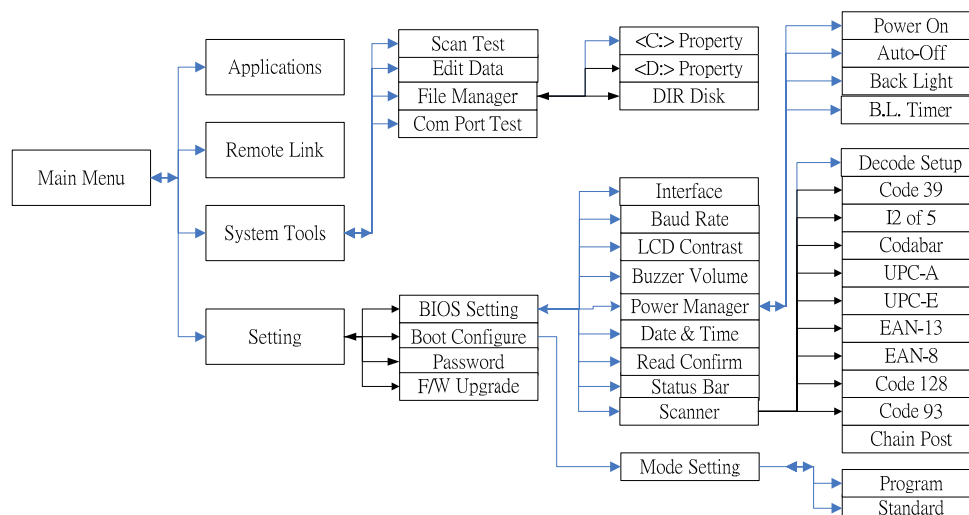
Item	Description
Setting Menu	After powering on, the system will required a password to get into Setting Menu. Normally it was used to transform Program Mode to Standard Mode.
Product Information	Show the model name and relative information of the collector.
BIOS Default Setting	Set all settings in BIOS to default values.

The detailed flow chart is shown as below:



## 4.4 Main Menu Structure

The main menu will be available only under Standard Mode. Please see the structure and function as below:



Item	Function	Remark
Applications	User can execute the designed program (create by ArgoBuilder or SDK) and proceed to collect and store data.	Need to use ArgoBuilder or SDK to create the user program.
Remote Link	Only go to this mode to download and upload files from (to) PC through ArgoLink.	Need to use ArgoLink to connect collector and PC.
System Tools	Include the tools used under system running.	
Scan Test	Barcode or scanning test	Based on scanner setting
Edit Data	Edit the collected data in stored file	
File Manager	Browse disk information or files in disks	
Com Port Test	Test RS-232 port connection	
Setting	Set up all the parameters of collector	
BIOS Setting	Set up BIOS functions	
Boot Configure	Set up operation mode	
Password	Change password for entering Setting menu	The default value is "0000"
F/W Upgrade	Change collector firmware	

#### 4.4.1 Applications




##### Function


User can execute a designed program and proceed to collect and store data based on the demands in the program. This program needs to be generated by ArgoBuilder and downloaded with relative files into collector by ArgoLink.



- The collector can store several programs and user can execute one of these programs by selecting in menu. Or user can use Program Mode to specify a program, and then the collector will start running this specified program when power on.
- There are several font sizes can be used in the user program: For 1 byte font: 8 x 8, 12 x 8, 16 x 12. For 2 byte font: 12 x 12, 16 x 16. In addition, the font and language demands will be generated together with project by ArgoBuilder.
- You can set in the program whether the collected data needs to be stored or not. If it needs to be stored, all the data files will be stored in C:\Data directory. Users can edit the data file in System Tools\Edit Data.
- Every user program is a Project. It includes the following files:

Item	Ext. file name	Stored directory	Description
Program	ABP	D:\Program	Main program in Project
Lookup file	DAT	D:\Lookup	When user collects and confirms the collected data to collector, the system will search the specified lookup file for any matched string, and replace it with the data shown on the display.
Fonts	SFT CFT	D:\Fonts	SFT is the system font and CFT is downloaded font. For detailed specification, please see in Hardware description (4.2.1, page 19).
Data	DAT	C:\Data	The stored area of collected data in program

##### Operation


- All the programs should be generated from ArgoBuilder and downloaded to collector through ArgoLink.
- Scanning function will be enabled only at the field, which was allowed to accept a scanned data.
- Only capital alphabet characters are available for PT-10 / PT-12. When you want to input alphabet characters, just simply to press Alpha Switch  and the  sign will be shown on the display (upside of battery indicator). When you press Alpha Switch  again, then it will return to numeral mode. You can press the specified key continuously in loop to get the exact alphabet character you need.

For example, if you want to get an “H”, just continuously press  key TWICE under Alpha Mode and you will get “H” after about 0.5 second.

- During data input, the cursor can be moved up, down, left and right as you desired according to the field length limit. If you want to input a “SPACE”, just simply press  to move the cursor right.
- If you press the Cancel Key , you will delete the data placed before the cursor.

#### 4.4.2 Remote Link

##### Function

- If the collector is idle for a long time, it will be turned of by Auto-off function. And it will be turned on again by manually power on or enabled through ArgoLink.
- Currently data files (.DAT), program files (.ABP), and Fonts file (.CFT) can be uploaded to PC. The other file formats can only be downloaded and deleted.
- If you want to exit this function, just simply press ESC key .

##### Equipment Required

- A communication cable (RS-232) or a CRD-10 cradle
- ArgoLink software


##### Settings

- You can select the communication interface at Setting\BIOS Setting\Interface. You can select serial port (RS-232) or USB port (only available for CRD-10). The default setting is serial port (RS-232).
- You can set up the collector output Baud Rate at Setting\BIOS Setting\Baud Rate. The default value is 115200 bps. The other serial port parameters can not be changed:









Data Bit:	8
Parity:	None
Stop Bit:	1
Flow Control:	RTS/CTS

### 4.4.3 System Tools

#### 4.4.3.1 Scan Test

- User can make a scanning test by this function. When a bar code was read successfully, the collector will send a Read Confirm according to the settings (at Setting\BIOS setting\Read Confirm\). It can be LED, Beep, Both or None. And the type of bar code, data length and read data will be shown on the display.
- Operation: When you press the Scan key , the LCD back light will be turned off (if you have set back light enabled). And the LED scanning light will keep on until a bar code data was read. Then the scanned data will be shown on the LCD display and the LCD back light will be turned on again. If there is no bar code or the scanner always can not read the barcode, the scanning will be stopped by the internal timer and the LED scanning light will be off. The scanning will be started again when the Scan key was pressed.

#### 4.4.3.2 Edit Data

- User can edit the data that was established and stored in the program.
  - Operation: When user goes into this function, the system will collect all the DAT files under C:\Data directory and list on the display. The total record number in each file will also listed on the display. User can proceed to browse the file contents and edit or delete the records in the file. After editing the data in record, just simply press ENT key  to confirm the operation, or press ESC key  to abort the operation.
  - Function key description:
    -  Move cursor LEFT
    -  Move cursor RIGHT
    -  Move cursor UP
    -  Move cursor DOWN
    -  Exit (editing completed or abort operation)
    -  Data Editing confirmation
- F1: Edit Record (**Browse Data**) or All data (**Delete Data**)  
F2: Delete Record (**Browse Data**) or Last one (**Delete Data**)

#### 4.4.3.3 File Manager

- User can browse the disk properties (memory total capacity, used space and free space) for both C and D.
- User can browse the files (DIR DISK) in both RAM disk and ROM disk.

#### 4.4.3.4 Com Port Test

- User can use this function to test whether the com port connection between host and collector is OK or not. There will be an icon shown on the right up corner of the display to show the connection status.

#### 4.4.4 Setting

##### 4.4.4.1 BIOS Setting

Enter from Setting\BIOS Setting. The options were listed as below:

Item	Parameter Range	Default	Description
Interface	RS-232 Cradle's USB	RS-232	You can upload or download files through either RS-232 or USB on cradle.
Baud Rate	4800 bps 9600 bps 19200 bps 38400 bps 57600 bps 115200 bps	115200 bps	The collector internal baud rate setting. The default value is 115200 bps.
LCD Contrast	1 ~ 12 Level	5	Set up LCD contrast from 1 (light) to 12 (dark)
Buzzer Volume	OFF, Low, Medium, High	Medium	Set up the buzzer volume or disable
Power Manager	(a) Power On: RESUE RESET	RESUME	Set up to resume the status before power off or restart the system when re-turn on the collector.
	(b) Auto-Off Off 30 Sec. ~ 4.5 Min.	1.5 Min.	Set up auto-off timer. The increment of the timer is 0.5 minute from 30 seconds to 4.5 minutes. If the setting is Off, the collector will never be auto-off.
	(c) Back Light On/Off	Off	Set up LCD back light to be off or on.
	(d) B.L. Timer 3 ~ 30 Sec	3 Sec.	Set up LCD back light timer. The increment of the timer is 3 seconds from 3 ~ 30 seconds.
Date & Time	mm-dd-yy 01-31-02 HH:MM:SS 08:30:00	mm: 1~12 dd: 1~31 yy: 01~99 HH: 0~23 MM: 0~59 SS: 0~59	Set up the time and date of Real Time Clock in collector.



Read Confirm	None Beep LED Both	Both	Set up the notice options when the scanner read and decode a bar code. None – without notice Beep – use beeper as notice LED – turn on green LED as notice Both – use both beeper and LED as notice
Status Bar	OFF ON	ON	Disable or enable the status bar
Scanner			Please see the details below

### Decode Setup -

1. Min. Length: The minimum length of data, from 01 to 20 (default 04).
2. Decode Level: The number of double verification, from 01 to 09 (default 01).

The followings are all the settings in Setting\BIOS Setting\Scanner and the bold contents are default values:



Code 39			
Decode		ON	OFF
Checksum Veri.	Check-sum verification	ON	<b>OFF</b>
Checksum Tran.	Check-sum transmission	ON	<b>OFF</b>
Full ASCII		ON	OFF
Start/End Char.		ON	<b>OFF</b>
I 2 of 5			
Decode		ON	OFF
Checksum Veri.	Check-sum verification	ON	<b>OFF</b>
Checksum Tran.	Check-sum transmission	ON	<b>OFF</b>
Codabar			
Decode		ON	<b>OFF</b>
Checksum Veri.	Check-sum verification	ON	<b>OFF</b>
Checksum Tran.	Check-sum transmission	ON	<b>OFF</b>
Start/End Char.	<b>None</b>   ABCD/TN*E   Abcd/abcd		
	ABCD/ABCD	Abcd/tn*e	
UPC-A			
Decode		ON	OFF
Checksum Tran.	Check-sum Transmission	ON	OFF
Supplement		ON	<b>OFF</b>
Leading Digit		ON	<b>OFF</b>
UPC-E			
Decode		ON	OFF
Checksum Tran.	Check-sum Transmission	ON	OFF
Supplement		ON	<b>OFF</b>
Leading Digit		ON	<b>OFF</b>

EAN-13			
Decode		ON	OFF
Checksum Tran.	Check-sum Transmission	ON	OFF
Supplement		ON	<b>OFF</b>
Leading Digit		ON	<b>OFF</b>
EAN-8			
Decode		ON	OFF
Checksum Tran.	Check-sum Transmission	ON	OFF
Supplement		ON	<b>OFF</b>
Leading Digit		ON	<b>OFF</b>
Code 128			
Decode		ON	OFF
Checksum Veri.	Check-sum Verification	ON	OFF
Checksum Tran.	Check-sum Transmission	ON	<b>OFF</b>
UCC/EAN-128		ON	<b>OFF</b>
Code 93			
Decode		ON	<b>OFF</b>
Checksum Tran.	Check-sum Transmission	ON	<b>OFF</b>
China Post			
Decode		ON	<b>OFF</b>

#### 4.4.4.2 Boot Configure

Mode Setting: This is used to set up the mode to standard Mode or Program Mode when power on.

**Program Mode:** When the collector is under Standard Mode, if you want to set Program Mode, you should have at least one user program stored in collector for user's selection. When you complete the setting from Standard Mode to Program Mode, the system will restart automatically and execute the specified user program.

**Standard Mode:** When the collector is under Program Mode, if you want to set Standard Mode, you need to power off the collector and use Hot-key (ESC  +PW ) to power on it. And then you will enter the Setting Menu to change the Power on Mode to Standard Mode.

For more information about mode changing, please see Power-on Operation in page 24 & 25.

#### 4.4.4.3 Password

For security reason, each time when you want to enter Setting Menu, you need to input a password to confirm the authority. The password was composed of 4 digits and the default password is "0000".

#### 4.4.4.4 F/W Upgrade

Sometimes the F/W might be changed for improving performance or other reasons. In any case you need to change the collector firmware; you will need to make it through ArgoLink software. Argox strongly suggest users not to change firmware by your own. Please contact your PT-10 / PT-12 local supplier for this technical support.



Argox will not be liable for any damage or system crash by improper operations of firmware change without advice or instruction from Argox or Argox's authorized support center.



Please refer to ArgoLink manual for details.

## 5. Scanning



Please take care of the handling precautions.



Please make sure that the collector is installed according to the installation instructions.



Never remove the main batteries (or battery pack) while the collector is turned on. Doing so can cause data in the collector to be deleted.



The collector is LED illumination and not a laser product. However, we recommend that you avoid looking directly into the LED light beam emitter, or pointing the LED light beam directly into someone's eyes.

Fit the bar code in the LED light beam from margin to margin and pass the scanner downward over the bar code, as shown in the scan position illustration

Good read scan position





Incorrect read scan positions



### 5.1 How to read the barcode

The scanning sequence is defined by the user's application. A typical sequence is:

- Press the PW key  to turn power on.
- Get into the System Tools\Scan Test and you will find the message on the display:  
<ScanTest>  
Type:  
Len:

- Point the collector to the barcode and press the Trigger key .

- Point the LED lightbeam to barcode as shown in the scan position illustration.
- The barcode will be read and the reading results will be indicated.

A “Good Read” means that the scanner has effectively recognized and decoded the bar code. In most cases, the application program will provide an indicator signal or a buzzer signal to indicate a good read to the user.

When the read is incorrect you can try again, paying attention to the instructions in this chapter.

When reading a small bar code, decrease the distance between the collector and the bar code. For larger bar codes, position the collector so that the bar code fits into the LED light beam. When reading a very high density bar code, decrease the distance between the collector and the bar code. For a low density bar code, increase the distance between the collector and the bar code.

## 5.2 Barcode reading problems

When the barcode can not be read, try the following:

- Change the angle between the bar code and the collector.
- Change the distance between the bar code and the collector.
- If the bar code is larger than the LED light beam, try moving the collector a bit further away from the bar code



## 6. Cable Pin-out

### 6.1 RS232 Cable for PT-10 / PT-12 (9-pin to 10-pin)



10 PIN / 1.25mm Connector



9PINS / D-Sub Female Type  
Connector For PC



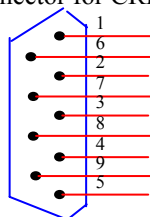
Pin	Signal	Description
1	VDD	Power output pin DC 3.3V
2	TXD0	Transmit data
3	RXD0	Receive data
4	GND	Ground
5	GND	Ground
6	N/C	-
7	nCTS	Clear to send
8	nRTS	Request to send
9	N/C	-
10	N/C	-

Pin	Signal	Description
1	N/C	-
2	RX	Receive data
3	TX	Transmit data
4	N/C	-
5	GND	Ground
6	N/C	-
7	RTS	Request to send
8	CTS	Clear to send
9	N/C	-

## 6.2 RS232 Cable for CRD-10 Cradle (9-pin to 9-pin)



9 PIN / D-Sub Male Type  
Connector for CRD-10



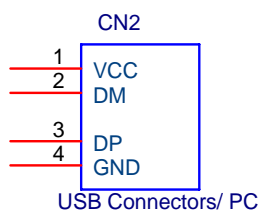
9 PIN / D-Sub Female Type  
Connector for PC



Pin	Signal	Description
1	N/C	-
2	TX	Transmit data
3	RX	Receive data
4	N/C	-
5	GND	Ground
6	N/C	-
7	CTS	Clear to send
8	RTS	Request to send
9	N/C	-

Pin	Signal	Description
1	N/C	-
2	RX	Receive data
3	TX	Transmit data
4	N/C	-
5	GND	Ground
6	N/C	-
7	RTS	Request to send
8	CTS	Clear to send
9	N/C	-

## 6.3 USB Connector for CRD-10 Cradle



Pin	Signal	Description
1	VCC	USB VCC = 5V
2	DM	Data Minus Pin
3	DP	Data Plus Pin
4	GND	Ground

## 7. Trouble Shooting

This chapter contains information on solving problems you may encounter when using the collector and/or cradle. If problems occur, first carry out some general checks before verifying the problem with the descriptions in this chapter.

### 7.1 General Checks

- Make sure everything is installed properly
- Check the power supply (including main battery or battery pack in collector) of all devices
- Is the reading window of the collector cleaned?
- Is the interface connector properly connected with the cable?
- Are the bar code labels readable, e.g. not damaged or poorly printed?

If the equipment still does not work after these checks have been performed, please verify if one of the problems described in this chapter applies to the problem you have with the collector.

It is possible that you may not solve the problems despite following our suggestions. In this case, please contact your local supplier or Argox for technical supports.

<http://www.argox.com>

When the collector needs to be repaired, please ensure that the label with the serial number is still present. If sending the collector or cradle back to your local supplier or Argox, please use the original package to minimize the chances of damage during transmission.

### 7.2 Communication Problems

**No communication from the cradle to the device or data is transmitted distorted or corrupted.**



*Power indicator of the cradle is not green*

- Clean the interface connectors of the cradle and/or collector, and try again.
- Check all cables. When the power indicator is still not green, the cradle needs service.



*No data transmitted*

- The cradle will only work if connected to a PC.
- Make sure the interface connectors of cradle and/or collector are well connected and clean the connectors if necessary, and try again.



*Data is corrupted, or no data is transmitted*

- Is the proper baud rate selected?  
The computer needs the same baud rate as the collector.
- Make sure the interface connectors of cradle and/or collector are well connected and clean the connectors if necessary, and try again.

### **The collector loses data when the battery pack is removed for a short period**



*The backup battery is empty*

- Recharging again with the main battery and backup battery. If the backup battery is still empty, the collector needs to be sent back to your local supplier or Argox to replace with a new one.

## **7.3 Read Operation Problems**

### **When the collector has a problem with reading the barcode label**



*The resolution of the bar code is too high*

- Decrease the distance between the bar code and the collector.



*The angle between the label and the collector is too high*

- Change the angle between the bar code and the collector.



*The distance is too far or too close*

- Change the distance between the bar code and the collector.



*The bar code is larger than the LED light beam*

- Try moving the collector a bit further away from the bar code.



*The scanning window is dirty*

- Clean the scanning window slightly of the collector (make sure without scratch).



*The type of the bar code label is not enabled*

- Enabled the bar code symbology in the application program.



## 7.4 Collector Problems


### Collector does not respond to key press while the display stays on



*Message “No Programs...” is shown when you try to start a program*

- There is no user's application program for PT-10 / PT-12 loaded in the collector. Contact your supplier.




*For example pressing the Alpha key  does not toggle the Alpha indicator*

- There is a flaw in the application program. Retrieve the battery pack and place it in again. Activate the system menu and restart the application program, or download new application.
- If problem appears continuously, contact the user's application program supplier.

### CCD scanner stays off, when pressing the Scan key



*Power is off*

- The Scan key is not the power key. Press the PW key  to get power first.
- If the collector is not used for a while, the collector will automatically switch off. Press any key to reactivate the collector.

### Collector gets no power, when pressing the power key



*The main battery is exhausted*

- Replace the batter pack, or charge the collector in the cradle.

### Collector is still not workable and needs a service

Send the collector to your local supplier for service, paying attention to the limited warranty.

## 8. Product Ordering Information

Item	Model Name	Description
1	PT-10	PT-10 portable collector unit
2	PT-12	PT-12 portable collector package
3	CRD-10	CRD-10 cradle unit
4	Battery Pack	3V Ni-HM battery pack
5	Empty Battery Pack	For both Alkaline and rechargeable batteries use
6	Power Supply	To provide the power to the CRD-10 cradle
7	RS232 Cable (9 to 10)	To use for PT-10 / PT-12 connecting directly to PC
8	RS232 Cable (9 to 9)	To use for CRD-10 cradle connecting to PC



**CRD-10 also supports standard USB cable communication. Please source it locally if required.**